

## **REMARKS**

The Official Action dated January 24, 2002 has been carefully considered. It is believed that the following comments represent a complete response to the Examiner's rejections and place the present application in condition for allowance. Reconsideration is respectfully requested.

### **35 USC § 112**

Claims 1,7 and 20 were rejected by the Examiner on the basis that the following terms were indefinite: "decreasing" and "improving". In the claims, these terms are used in the context of the following phrases: "decreasing viscoelasticity of respiratory tract mucus" and "improving mucus clearance". Applicant respectfully traverses the Examiner's objection by submission of the enclosed declaration of Dr. David Speert. Dr. Speert, in paragraphs 5 to 7 of his declaration states that these terms would be understood by a person of skill in the art in light of the description.

### **35 USC § 103(a)**

Claims 1-19 and 27-28 were rejected by the Examiner as being obvious in light of the following references:

- (i) Speert et al (US Patent No. 5,514,665);
- (ii) Beller et al (Am. J. Obstet. Gynecol.);
- (iii) Ahmed (US Patent No. 5,980,865); and
- (iv) Kennedy et al. (WO 91/15216).

In addition to Applicant's submissions made in reply to the previous office action dated December 6, 2001, which are herein incorporated by reference, Applicant encloses herewith the declaration of Dr. David Speert in support of its submissions of non-obviousness of the claims of the present invention.

From paragraphs 9 – 14 of Dr. Speert's declaration, it is clear that none of the references noted by the Examiner teach a method of altering the rheology of respiratory tract mucus, e.g. altering the viscosity or clearability of respiratory tract mucus.

Speert et al (US Patent No. 5,514,665) disclose the use of dextran sulfate as an anti-adhesive agent to inhibit attachment of bacteria to epithelial cells.

Beller et al (Am. J. Obstet. Gynecol.) disclose the use of dextran sulfate to lyse a substance (a gelatinous material of *pseudomyxoma peritonei*) that is chemically very different from respiratory tract mucus.

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Ahmed (US Patent No. 5,980,865) discloses the use of low molecular weight heparins or other sulfated polysaccharides as anti-inflammatory agents to treat allergic diseases of the respiratory tract. No mention is made on the affect of such substances on respiratory tract mucus.

Kennedy et al. (WO 91/15216) teach that dextran sulfate has anti-elastase activity that can inhibit colonization of bacteria.

As such it is submitted that the references cannot be combined to render a method of decreasing the viscoelasticity of respiratory tract mucus and improving its clearability

obvious. It is submitted that there is no teachings in the references cited by the Examiner that would motivate a person of skill in the art to use a charged dextran as a mucoactive agent to affect the viscoelasticity and clearability of respiratory tract mucus.

In view of the foregoing, it is submitted that the application is in order for allowance and an early indication to that effect would be greatly appreciated. Should the Examiner like to discuss the matter, he is kindly requested to contact Anita Nador at 416-957-1684 at his convenience.

Respectfully submitted,

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Enclosure: Declaration of Dr. David P. Speert  
Feng, 1998, Am. J. Resp. Crit. Care Med., 157:710-714